

**CLAIMS:**

1. A catalyst composition comprising a catalyst compound, an activator capable of converting said catalyst compound into an active catalyst for addition polymerization, optionally a carrier, further optionally a liquid diluent, and a hydroxycarboxylate metal salt additive.

2. A catalyst composition according to claim 1 wherein the hydroxycarboxylate metal salt is a hydroxy-substituted, mono-, di- or tri-carboxylic acid salt wherein the metal portion is a cationic derivative of a metal from Groups 1-13 of the Periodic Table of Elements.

10 3. A catalyst composition according to claim 1 wherein the metal salt is represented by the following general formula:



15  $M^q$  is a metal from Groups 1 to 16 and the Lanthanide and Actinide series, preferably from Groups 1 to 7 and 12 to 16, more preferably from Groups 3 to 7 and 12 to 14, even more preferably Group 12, and most preferably Zn;

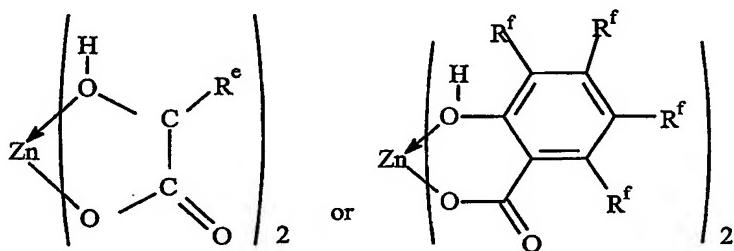
$Q^a$  is halogen, hydrogen, hydroxide, or an alkyl, alkoxy, aryloxy, siloxy, silane, sulfonate or siloxane group of up to 20 atoms not counting hydrogen;

20  $Q^b$  is a hydrocarbyl radical having from 1 to 50 carbon atoms, preferably 1 to 20 carbon atoms, and optionally substituted with one or more hydroxy, alkoxy, N,N-dihydrocarbylamino, or halo groups, with the proviso that in one occurrence R is substituted with a hydroxy- or N,N-dihydrocarbylamino- group, preferably a hydroxy- group that is coordinated to the metal, M by means of unshared electrons thereof;

$q'$  is an integer from 0 to 3;

$q''$  is an integer from 1 to 4.

25 4. A catalyst composition according to claim 1 wherein the hydroxycarboxylate metal salt corresponds to the formula:



wherein  $R^e$  and  $R^f$  independently each occurrence are hydrogen, halogen, or C<sub>1-6</sub> alkyl.

30 5. An olefin polymerization process wherein one or more olefin monomers are polymerized in the presence of a catalyst composition characterized in that the catalyst

composition comprises a hydroxycarboxylate metal salt corresponding to any one of claims 1-4.